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| **SCIENCE LONG TERM TRANSFER GOALS** | |
| Students will be able to independently use their learning to:   1. Approach science as a reliable and tentative way of knowing and explaining the natural world and apply this understanding to a variety of situations. 2. Weigh evidence and use scientific approaches to ask questions, investigate, make informed decisions about how they live their daily lives, and engage in their vocations and communities. 3. Make and use observations to identify and analyze relationships and patterns in order to explain phenomena, develop models, and make predictions. 4. Evaluate systems, including their components and subsystems, in order to connect how form determines function and how any change to one component affects the entire system. 5. Explain how the natural and designed worlds are interrelated and the application of scientific knowledge and technology can have beneficial, detrimental, or unintended consequences. | |
| **PHYSICAL SCIENCE BIG IDEAS AND ESSENTIAL QUESTIONS** | |
| **Big Ideas** | **Essential Questions** |
| Big Idea 1:  Matter can be understood in terms of the types of atoms present and the interactions both between and within atoms. | *How can one explain the structure, properties, and interactions of matter?* |
| Big Idea 2:  Interactions between any two objects can cause changes in one or both of them. | *How can one explain and predict interactions between objects within systems?* |
| Big Idea 3:  Interactions of objects or systems of objects can be predicted and explained using the concept of energy transfer and conservation. | *How is energy transferred and conserved?* |
| Big Idea 4:  Waves are a repeating pattern of motion that transfers energy from place to place without overall displacement of matter. | *How are waves used to transfer energy and information?* |